

Comparisons of Job Characteristics

Focus Occupation: **Computer Programmers (15-1021)**

Associated Occupation: **Network Systems and Data Communications Analysts (15-1081)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 82

Focus Occupation: Computer Programmers (15-1021)

Associated Occupation: Network Systems and Data Communications Analysts (15-1081)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Computers and Electronics	8.4	21.2	24.2	>> Current knowledge level is likely more than sufficient
Telecommunications	3.9	17.4	4.8	<< Extensive education and/or training may be required
Customer and Personal Service	11.3	13.4	9.0	<< Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 55

Focus Occupation: Computer Programmers (15-1021)

Associated Occupation: Network Systems and Data Communications Analysts (15-1081)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Systems Analysis	6.5	12.8	9.2	<< Extensive development of skills in this area may be required
Operations Analysis	5.0	11.5	10.1	< A higher skill level may be required
Systems Evaluation	6.4	11.5	10.1	< A higher skill level may be required
Troubleshooting	4.5	10.3	2.6	<< Extensive development of skills in this area may be required
Quality Control Analysis	5.9	10.0	11.6	> Skill level is likely sufficient
Programming	2.2	9.6	17.3	>> Skill level is likely more than sufficient
Technology Design	2.6	9.1	6.2	<< Extensive development of skills in this area may be required
Equipment Selection	3.3	8.5	1.6	<< Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 92			
Focus Occupation: Computer Programmers (15-1021)					
Associated Occupation: Network Systems and Data Communications Analysts (15-1081)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Deductive Reasoning	10.6	12.3	12.2	0	Current ability level may be sufficient
Information Ordering	9.9	11.6	12.8	>	Current ability level is likely sufficient
Fluency of Ideas	7.6	9.7	8.3	<	Some improvement in abilities may be required
Selective Attention	8.7	9.7	9.3	0	Current ability level may be sufficient
Originality	7.6	9.4	8.7	0	Current ability level may be sufficient
Perceptual Speed	7.4	8.8	8.7	0	Current ability level may be sufficient
Speed of Closure	5.9	8.5	3.7	<<	Extensive improvement in abilities may be required
Memorization	5.6	7.3	5.8	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 94
Focus Occupation: Computer Programmers (15-1021) Associated Occupation: Network Systems and Data Communications Analysts (15-1081)		
Work Activities	Exclusivity of Activity	
Adjust computer operation system	84	
Communicate technical information	4	
Configure computers in industrial or manufacturing setting	89	
Consult with customers concerning needs	69	
Evaluate computer system user requests or requirements	81	
Follow data security procedures	77	
Follow data storage procedures	75	
Implement computer system changes	92	
Maintain client-server database	89	
Maintain or repair computers or related equipment	81	
Monitor computer operation	85	
Prepare instruction manuals	78	
Prepare technical reports or related documentation	22	
Program computers using existing software	85	
Program mainframe computer	84	

Provide technical computer training	82
Provide technical support to computer users	80
Recommend software or hardware purchases	85
Resolve symbolic formulations in data processing applications	89
Test computer programs or systems	78
Test data communications hardware or software	99
Use computer application flow charts	84
Use computers to enter, access or retrieve data	3
Use knowledge of mainframe computers	78
Use project management techniques	47
Use spreadsheet software	18
Use word processing or desktop publishing software	17
Write computer software, programs, or code	84

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 78

Focus Occupation: Computer Programmers (15-1021)

Associated Occupation: Network Systems and Data Communications Analysts (15-1081)

Tools and Technologies	Exclusivity
Business function specific software	1
Computers	1
Content authoring and editing software	1
Content management software	6
Data management and query software	1
Development software	4
Industry specific software	1
Network applications software	1
Operating environment software	12

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.